

## REMARKS

The Official Action of July 7, 2003 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claim 1 has been amended by the incorporation therein of the recitations formerly in claims 2 and 7, and the latter claims have been canceled. Claim 1 has also been amended to clarify that there are two (2) recited polymers and that the "sulfonyl group containing (co) polymer" means a sulfonyl group containing polymer or copolymer (see definition in specification at page 7, second full paragraph).

Certain claims were rejected under 35 USC 102(b) or (e) as allegedly being anticipated by Ichizawa et al, Yui et al, Doi et al or JP 11217525. Other claims were rejected under 35 USC 103(a) as allegedly being unpatentable over combinations including the aforementioned references or Anton et al, as primary references, in view of the secondary references cited in paragraphs 8 and 9 of the Official Action. Applicants respectfully traverse these rejections.

### **Novelty**

Applicants first note that none of the 102 rejections has been applied against the recitations of claim 7, which have now been incorporated into claim 1. Moreover, among the primary references cited by the Examiner, Ishizawa et al. (USP 6,368,397),

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Yui et al (USP 5,977,207) and Doi et al (USP 6,378,999) do not disclose the use of an emulsion of a sulfonyl group-containing (co) polymer as required in the original claim

2. These references each may disclose an ink composition comprising water, a pigment to be dispersed with a resin, a sulfonyl group-containing (co) polymer, an ultra-penetrating agent. However, the sulfonyl group-containing (co) polymer disclosed in these references is used as a resin for dispersing a pigment.

In the claimed invention, on the other hand, the sulfonyl group-containing (co) polymer is in the form of an emulsion, rather than a dispersant. The amended claim 1 recites this feature and explicitly requires that the ink composition comprises an emulsion of the sulfonyl group-containing (co) polymer. Accordingly, none of Ishizawa et al, Yui et al and Doi et al anticipates the claimed invention as defined in the amended claims for this reason as well.

### **Nonobviousness**

With respect to the other primary references, JP 11217525 and Anton et al, only the JP reference contains a general description which could even arguably relate to the ultra-penetrating agent of the claimed invention, and this can only be seen in the JP reference at paragraph [0030], wherein diethylene glycol monobutyl ether is enumerated as an example of polyhydric alcohol ether humectants. Accordingly, although it is acknowledged that the JP reference can be considered as the closest prior art, JP 11217525 does not show or suggest the use of the specific combination of

ultra-penetrating agents as recited in the original claim 7 and now incorporated in the amended claim 1.

In order to demonstrate the unexpectedly superior effects given by the ink composition of the amended claim 1 (i.e., the features of the original claims 2 and 7) over the closest prior art embodiment, comparative experiments have been done, as shown in the attached (unexecuted) Rule 132 Declaration of Mr. Watanabe, the first-named inventor. An executed copy of the Declaration will follow shortly.

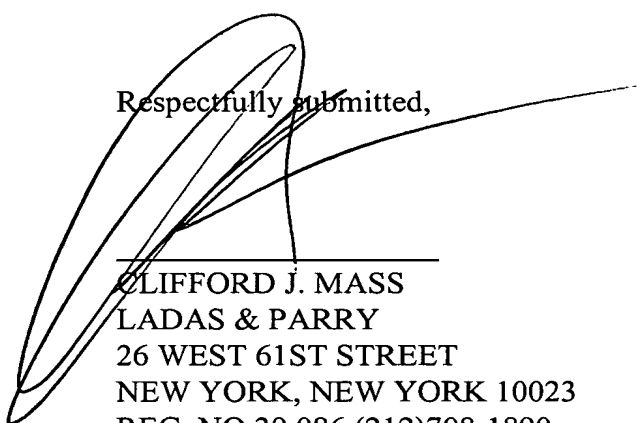
The attached Declaration provides evidence of unexpectedly advantageous results that is sufficient to rebut the alleged *prima facie* case of obviousness set forth by the cited references. In particular, the results show that the claimed ink composition performs better in the evaluations described in the specification at page 32, last paragraph to page 35, line 18 than an ink composition (Ink Set F) which is identical except for the replacement of the recited ultra-penetrating agent with the diethylene glycol monobutyl ether of the closest prior art reference. These results could not have been expected from the cited primary or secondary references, either alone or in combination. (It is noted that one of the secondary references, Sano et al, applied against former claim 7 also describes the use of diethylene glycol monobutyl ether (Sano et al at column 8, line 53). **The other secondary reference applied against claim 7, Yatake et al US Patent 6,454,846, and the presently claimed invention were, at the time the presently claimed invention was made, subject to an obligation of assignment to the same entity, Seiko Epson Corporation. Thus,**

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**Yatake et al would be disqualified as a reference in any event.)**

In view of the above, it is respectfully submitted that all rejections and objections of record have been overcome and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,



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